

## SHIPPING 4.0

## The pace of technology

From its origins in government laboratories, to the smart phones in everyone's pockets and up into the Cloud, the development of digital technology has taken us places we could hardly have imagined when it began.

ABB Chief Digital Officer Guido Jouret's message is all about the journey. Speaking via video link to a group of journalists gathered in ABB Marine & Ports' Helsinki office, Jouret pointed out that the 2000s have seen innovation in digital technology spill over into the consumer space, leading to explosive improvements in computation, storage, and connectivity.

"Those technologies are now reaching the industrial markets," he observed, creating massive opportunities for new value creation. "And this value migration is just beginning. Many industrial companies have been held back from embracing digital transformation because digital technologies needed to unlock value were too expensive or unavailable."

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What the consumer technology revolution has done, Jouret said, is to make massive quantities of computing and storage available at dramatically lower cost, via the cloud. "Now developments

like artificial intelligence and 3D printing are finding applications in the industrial space. This is why we believe that many of our markets are currently primed for a dramatic acceleration in their adoption of digital technologies."

Jouret assured that ABB is ready to help, with their new concept of ABB Ability™. Basically a hierarchy of automation, from sensors to connected devices to cloud distribution, he explained that ABB Ability is set to allow customers to enjoy greater uptime, higher speed, higher yield, improved safety, and enhanced security.

### Closing the loop

Not just cloud computing, ABB Ability is based on the concept of cloud interconnectivity. "We believe that we need to connect the clouds to create an 'intercloud' that enables interoperability of systems. This is much easier to do at a cloud-to-cloud level where digital resources are plentiful and cheap. This is the technology that allows us to close the loop between sensing, analysing, and acting."

The best part of all this, Guido Jouret assures: "The digital opportunity is here today. The technology innovations that have been transforming our lives as consumers since the beginning of this century are now being applied to the industrial space, and customers are already benefiting. ABB Ability solutions are ready now."



Question and answer with Guido Jouret and selected maritime journalists and editors:

### ABB is ready for digital shipping – but is shipping ready for ABB?

I think regulations will restrict moves in the industry more than the players themselves. That means in some cases we would have to implement incrementally, but much of what we can offer is compliant today.

### Will the kind of data sharing you have been talking about require more standardisation?

The cloud will enable adaptation of common platforms, exchanging data to enable interoperable solutions. Also we are seeing that Blockchain technology can ensure trustworthy interactions between players.

### Wouldn't it be better to have an industry-wide standard to ensure interoperability?

We will have to start with manageable partnerships and move up the stack. Technology moves faster than regulations, and I don't think any industry wants to wait for a single uniform standard before taking advantage of today's technology.

### Regarding the human element in shipping, how can you involve more traditional crew that have practically no relation to the digital world?

Of course not all jobs will be affected, but many people will move into new kinds of jobs. There will be more jobs on shore, involving varying degrees of human-machine interaction.

### Are there limitations on sensor technology that is imbedded in ships with a lifetime of 30 years?

The usefulness of such sensors at the lowest level will become limited over time. It's easier to upgrade further up the hierarchy. The cloud will compensate for some of these problems, and then we have to address sensor and lower level problems as they arise.

### How will digitalisation change the workplace?

More collaboration and more complex problem solving require new insight, and that will require a higher level of training, and higher skill levels. Previous industrial revolutions displaced muscle power. The 4th industrial revolution is displacing brainpower, and it is moving much faster. We will have one generation to adapt, not one century.